

IN THE SEQUENCE LISTING

Kindly enter the attached substitute Sequence Listing.

Paper and computer readable forms of the Sequence Listing are being submitted herewith in response to the Examiner's requirement. The paper and computer readable forms of the Sequence Listing do not add new matter, and their contents are the same.



SEQUENCE LISTING

<110> Hellinga, Homme W.
Looger, Loren L.

<120> Biosensor

<130> 1579-863

<140> US 10/686,529

<141> 2003-10-16

<150> US 60/418,359

<151> 2002-10-16

<160> 3

<170> MS Word

<210> 1

<211> 226

<212> PRT

<213> Escherichia coli

<400> 1

Ala Asp Lys Lys Leu Val Val Ala Thr Asp Thr Ala Phe Val Pro Phe
1 5 10 15

Glu Phe Lys Gln Gly Asp Lys Tyr Val Gly Phe Asp Val Asp Leu Trp
20 25 30

Ala Ala Ile Ala Lys Glu Leu Lys Leu Asp Tyr Glu Leu Lys Pro Met
35 40 45

Asp Phe Ser Gly Ile Ile Pro Ala Leu Gln Thr Lys Asn Val Asp Leu
50 55 60

Ala Leu Ala Gly Ile Thr Ile Thr Asp Glu Arg Lys Lys Ala Ile Asp
65 70 75 80

Phe Ser Asp Gly Tyr Tyr Lys Ser Gly Leu Leu Val Met Val Lys Ala
85 90 95

Asn Asn Asn Asp Val Lys Ser Val Lys Asp Leu Asp Gly Lys Val Val
100 105 110

Ala Val Lys Ser Gly Thr Gly Ser Val Asp Tyr Ala Lys Ala Asn Ile
115 120 125

Lys Thr Lys Asp Leu Arg Gln Phe Pro Asn Ile Asp Asn Ala Tyr Met
130 135 140

Glu Leu Gly Thr Asn Arg Ala Asp Ala Val Leu His Asp Thr Pro Asn
145 150 155 160

Ile Leu Tyr Phe Ile Lys Thr Ala Gly Asn Gly Gln Phe Lys Ala Val
165 170 175

Gly Asp Ser Leu Glu Ala Gln Gln Tyr Gly Ile Ala Phe Pro Lys Gly
180 185 190

Ser Asp Glu Leu Arg Asp Lys Val Asn Gly Ala Leu Lys Thr Leu Arg
195 200 205

Glu Asn Gly Thr Tyr Asn Glu Ile Tyr Lys Lys Trp Phe Gly Thr Glu
210 215 220

Pro Lys
225

<210> 2
<211> 238
<212> PRT
<213> Escherichia coli

<400> 2

Ala Ile Pro Gln Asn Ile Arg Ile Gly Thr Asp Pro Thr Tyr Ala Pro
1 5 10 15

Phe Glu Ser Lys Asn Ser Gln Gly Glu Leu Val Gly Phe Asp Ile Asp
20 25 30

Leu Ala Lys Glu Leu Cys Lys Arg Ile Asn Thr Gln Cys Thr Phe Val
35 40 45

Glu Asn Pro Leu Asp Ala Leu Ile Pro Ser Leu Lys Ala Lys Lys Ile
50 55 60

Asp Ala Ile Met Ser Ser Leu Ser Ile Thr Glu Lys Arg Gln Gln Glu
65 70 75 80

Ile Ala Phe Thr Asp Lys Leu Tyr Ala Ala Asp Ser Arg Leu Val Val
85 90 95

Ala Lys Asn Ser Asp Ile Gln Pro Thr Val Glu Ser Leu Lys Gly Lys
100 105 110

Arg Val Gly Val Leu Gln Gly Thr Thr Gln Glu Thr Phe Gly Asn Glu
115 120 125

His Trp Ala Pro Lys Gly Ile Glu Ile Val Ser Tyr Gln Gly Gln Asp
130 135 140

Asn Ile Tyr Ser Asp Leu Thr Ala Gly Arg Ile Asp Ala Ala Phe Gln
145 150 155 160

Asp Glu Val Ala Ala Ser Glu Gly Phe Leu Lys Gln Pro Val Gly Lys
165 170 175

Asp Tyr Lys Phe Gly Gly Pro Ser Val Lys Asp Glu Lys Leu Phe Gly
180 185 190

Val Gly Thr Gly Met Gly Leu Arg Lys Glu Asp Asn Glu Leu Arg Glu
195 200 205

Ala Leu Asn Lys Ala Phe Ala Glu Met Arg Ala Asp Gly Thr Tyr Glu
210 215 220

Lys Leu Ala Lys Lys Tyr Phe Asp Phe Asp Val Tyr Gly Gly
225 230 235

<210> 3
<211> 275
<212> PRT
<213> Escherichia coli

<400> 3

Met Ala Gly Ser Thr Leu Asp Lys Ile Ala Lys Asn Gly Val Ile Val
1 5 10 15

Val Gly His Arg Glu Ser Ser Val Pro Phe Ser Tyr Tyr Asp Asn Gln
20 25 30

Gln Lys Val Val Gly Tyr Ser Gln Asp Tyr Ser Asn Ala Ile Val Glu
35 40 45

Ala Val Lys Lys Lys Leu Asn Lys Pro Asp Leu Gln Val Lys Leu Ile
50 55 60

Pro Ile Thr Ser Gln Asn Arg Ile Pro Leu Leu Gln Asn Gly Thr Phe
65 70 75 80

Asp Phe Glu Cys Gly Ser Thr Thr Asn Asn Val Glu Arg Gln Lys Gln
85 90 95

Ala Ala Phe Ser Asp Thr Ile Phe Val Val Gly Thr Arg Leu Leu Thr
100 105 110

Lys Lys Gly Gly Asp Ile Lys Asp Phe Ala Asn Leu Lys Asp Lys Ala
115 120 125

Val Val Val Thr Ser Gly Thr Thr Ser Glu Val Leu Leu Asn Lys Leu
130 135 140

Asn Glu Glu Gln Lys Met Asn Met Arg Ile Ile Ser Ala Lys Asp His
145 150 155 160

Gly Asp Ser Phe Arg Thr Leu Glu Ser Gly Arg Ala Val Ala Phe Met
165 170 175

Met Asp Asp Ala Leu Leu Ala Gly Glu Arg Ala Lys Ala Lys Lys Pro
180 185 190

Asp Asn Trp Glu Ile Val Gly Lys Pro Gln Ser Gln Glu Ala Tyr Gly
195 200 205

Cys Met Leu Arg Lys Asp Asp Pro Gln Phe Lys Lys Leu Met Asp Asp
210 215 220

Thr Ile Ala Gln Val Gln Thr Ser Gly Glu Ala Glu Lys Trp Phe Asp
225 230 235 240

Lys Trp Phe Lys Asn Pro Ile Pro Pro Lys Asn Leu Asn Met Asn Phe
245 250 255

Glu Leu Ser Asp Glu Met Lys Ala Leu Phe Lys Glu Pro Asn Asp Lys
260 265 270

Ala Leu Asn
275